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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,668	07/16/2003	Sandeep Lodha	RSTN-119	9563
30139 7590 08/14/2007 WILSON & HAM 2530 BERRYESSA ROAD PMB: 348 SAN JOSE, CA 95132			EXAMINER SINKANTARAKORN, PAWARIS	
			ART UNIT 2616	PAPER NUMBER
			MAIL DATE 08/14/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/620,668

Applicant(s)

LODHA, SANDEEP

Examiner

Pao Sinkantarakorn

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-10 and 14-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-10 and 14 is/are allowed.
- 6) ☒ Claim(s) 1,2,4-7 and 15-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. Claims 1, 2, 4-10, 14-20 are pending. Claims 3, and 11-13 are canceled.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2, 4-7, and 15-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Bly et al. (US 2004/0042399).

**Regarding claims 1 and 15**, Bly et al. disclose a method for forwarding packet-based traffic through a network node comprising:

receiving a traffic type bandwidth limitation from the customer (see paragraph 25, line 1);

dedicating a group of queues in a network node to a customer (see paragraph 24, lines 7 – 8, 11 – 15);

translating the traffic type bandwidth limitation to a queue-specific bandwidth limitation of the respective queue-specific bandwidth limitations (see paragraph 24, lines 1 – 3, paragraph 25, line 1, paragraph 29, lines 10 - 12);

performing queue-specific rate shaping on the customer's traffic according to queue-specific bandwidth limitations respectively associated with the queues (see paragraph 25, lines 1 – 3, Figure 6, Box 50 Bandwidth Allocation Table, wherein queue-specific credit allocation request limitation corresponds to queue-specific bandwidth limitations) and

performing group-specific rate shaping on the customer's traffic according to a group-specific bandwidth limitation associated with the group of queues (see paragraph 30, lines 1 – 13);

**regarding claim 2**, associating queues from the group of queues with different types of traffic that are to be received from the customer (see paragraph 24, lines 1- 4);

**regarding claim 4**, associating the group of queues with a group rate shaper that performs the group-specific rate shaping on the customer's traffic on an aggregate basis (see paragraph 21, line 11 – 13, wherein the burst group manager corresponds to a group rate shaper, paragraph 30, lines 1 – 13);

**regarding claim 5**, prioritizing the queues of the group of queues (see paragraph 38, lines 9 – 13, paragraph 39, lines 1- 6);

**regarding claim 6**, distributing the portion of excess unused bandwidth among the group of queues on a priority basis according to the prioritizing (see paragraph 39, lines 6 – 14);

**regarding claim 7**, scheduling packets for forwarding from one or more of the queues in the group of queues (see paragraph 27, lines 5 – 8), wherein bandwidth consumed by the packets from each of the queues is equal to respective queue-specific

bandwidth limitations for the queues (see paragraph 30, lines 5 – 8); identifying excess unused bandwidth when the consumed bandwidth is less than the group-specific bandwidth limitation (see paragraph 39, lines 6 – 10, wherein listing a queue with maximum request value at the end of the Bandwidth Allocation Table corresponds to identifying excess unused bandwidth); and distributing a portion of the excess unused bandwidth to a first queue of the group of queues (see paragraph 39, lines 6 – 12), wherein the sum of the consumed bandwidth and the portion of the excess unused bandwidth is equal to a group-specific bandwidth limitation for the group (see paragraph 39, lines 10 – 13, wherein line 11, the phrase “allow queue 44 to have whatever is left over” implies the sum of the consumed bandwidth and the portion of the excess unused bandwidth is equal to a group-specific bandwidth limitation for the group);

**regarding claim 16**, prioritizing the traffic channels relative to one another (see paragraph 38, lines 9 – 13, paragraph 39, lines 1- 6);

**regarding claim 17**, the performing traffic-type-specific rate shaping consumes less bandwidth than the customer-specific bandwidth limitation (see paragraph 30, lines 1 – 13), the method further comprising:

identifying excess unused bandwidth following the traffic-type-specific rate shaping; and distributing the excess unused bandwidth to a subset of the traffic channels in priority order according to the prioritizing (see paragraph 39, lines 6 – 14);

**regarding claim 18**, associating a traffic type with each traffic channel (see paragraph 24, lines 1 – 4);

regarding claim 19, adjusting the traffic-type-specific rate shaping according to traffic type-specific rate shaping customer preferences (see paragraph 25, lines 1 – 3, paragraph 29, lines 10 – 13).

***Claim Rejections - 35 USC § 103***

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bly et al. in view of Aatresh (US 6,067,301).

**Regarding claim 20**, Bly et al. disclosed, regarding claim 20, all the subject matter of the claimed invention as recited in paragraph 5 of this office action.

Bly et al. fail to teach associating respective traffic-type-specific bandwidth limitations with each traffic channel such that a sum of the respective traffic-type-specific bandwidth limitations is less than or equal to the customer-specific bandwidth limitation as recited in claim 20.

Aatresh from the same or similar field of endeavors teach associating respective traffic-type-specific bandwidth limitations with each traffic channel such that a sum of the respective traffic-type-specific bandwidth limitations is equal to the customer-specific bandwidth limitation (see column 7, lines 33 – 38, wherein the total data link bandwidth corresponds to the customer-specific bandwidth limitation) as recited in claim 20.

Thus, it would have been obvious to a person of ordinary skill in the art at the time of the invention to use associating respective traffic-type-specific bandwidth limitations with each traffic channel such that a sum of the respective traffic-type-specific bandwidth limitations is less than or equal to the customer-specific bandwidth limitation as recited in claim 20 in the method taught by Bly et al. in order to fully utilize the available bandwidth.

***Allowable Subject Matter***

8. Claims 8-10, and 14 are allowed.

The following is an examiner's statement for reason for allowance:

9. Claim 8 is allowable over the prior art of record since the cited references taken individually or in combination fails to particularly disclose a scheduler configured to schedule, in subrounds of the first round, packets enqueued in the plurality of queues according to a priority respectively associated with each of the queues and schedule, in subrounds of the second round, packets enqueued in the plurality of queues according to the priority respectively associated with each of the queues; and wherein the result vector indicates which queues are enabled for sending packets, wherein the first round a result vector for a queue is enabled only when both the individual queue enablement vector and the group vector indicate that the queue is enabled and in the second round a result vector for a queue indicates a queue is enabled as long as the group vector indicates that the group is enabled. It is noted that the closest prior art, Bly et al. (US 2004/0042399) shows a data traffic shaping for grouping of bandwidth allocations. However, Bly et al. fails to disclose or render obvious the above underlined limitations as claimed.

***Response to Arguments***

10. Applicant's arguments filed 06/04/2007 have been fully considered but they are not persuasive.



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On page 1 of the remarks, regarding claim 1, applicant argues that Bly does not disclose receiving traffic type bandwidth limitations from a customer. In reply, the examiner respectfully disagrees. The grouping of traffic is done by classifying traffic with similar needs; for example, "all pay-per-view" video traffic or "all traffic for customer X" (see paragraph 24). In order to classify pay-per-view video traffic, traffic type bandwidth limitation has to be sent from a customer; otherwise, provider would not have known that the customer is requesting for pay-per-view video traffic. Because of the similarities between claim 1 and 15, the examiner asserts that the reply provided above with reference to claim 1 applies also to claim 15.

Therefore, in view of the above reasoning, the examiner believes that the 102(e) rejection is proper and should be sustained.

### ***Conclusion***

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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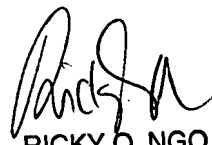
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pao Sinkantarakorn whose telephone number is 571-270-1424. The examiner can normally be reached on Monday-Thursday 9:00am-3:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PS



RICKY Q. NGO  
SUPERVISORY PATENT EXAMINER